DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: BAPTIST POND	Lake Area (ha):	40.02
Town: SPRINGFIELD	Maximum depth (m):	7.5
County: Sullivan	Mean depth (m):	2.4
River Basin: Connecticut	Volume (m³):	972500
Latitude: 43°27'04" N	Relative depth:	1.0
Longitude: 72°04'52" W	Shore configuration:	1.29
Elevation (ft): 1266	Areal water load (m/yr	: 8.98
Shore length (m): 2900	Flushing rate (yr^{-1}) :	3.70
Watershed area (ha): 673.	4 P retention coeff.:	0.56
<pre>% watershed ponded: 0.</pre>	6 Lake type:	natural

BIOLOGICAL:	14 January 1997	1 July 1996
DOM. PHYTOPLANKTON (% TOTAL) #1	. ASTERIONELLA 60%	ASTERIONELLA 60%
#2	(ALL ALGAE SPARSE)	TABELLARIA 30%
#3		
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		6.40
DOM. ZOOPLANKTON (% TOTAL) #1	NAUPLIUS LARVA 28%	ACTINOPHRYS 44%
#2	BOSMINA 28%	POLYARTHRA 18%
#3		KERATELLA 9%
ROTIFERS/LITER	2	188
MICROCRUSTACEA/LITER	15	60
ZOOPLANKTON ABUNDANCE (#/L)	18	574
VASCULAR PLANT ABUNDANCE		Scat/Common
SECCHI DISK TRANSPARENCY (m)		2.5
BOTTOM DISSOLVED OXYGEN (mg/L)	4.9	0.2
BACTERIA (E. coli, #/100 ml) #1		< 10
#2	2	
#3	3	

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 4.6
Hypolimnion volume (m³): 15000
Anoxic volume (m³): 4300

CHEMICAL:			BAPTIST I		
	14 January 1997		1 3	July 1996	
DEPTH (m)	3.0	5.0	2.0	4.5	6.5
pH (units)	5.5	5.5	6.2	5.8	5.6
A.N.C. (Alkalinity)	5.1	6.0	4.2	3.9	4.7
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.28	0.33			
TOTAL PHOSPHORUS	0.010	0.012	0.012	0.015	0.021
CONDUCTIVITY (µmhos/cm)	76.6	88.1	85.1	85.2	89.8
APPARENT COLOR (cpu)	44	47	40	45	75
MAGNESIUM		-	0.54		
CALCIUM			3.6		
SODIUM			12.7		
POTASSIUM			0.66		
CHLORIDE	15	18	18		18
SULFATE	. 5	5	5	1	4
TN : TP	28	28			
CALCITE SATURATION INDEX			3.9		

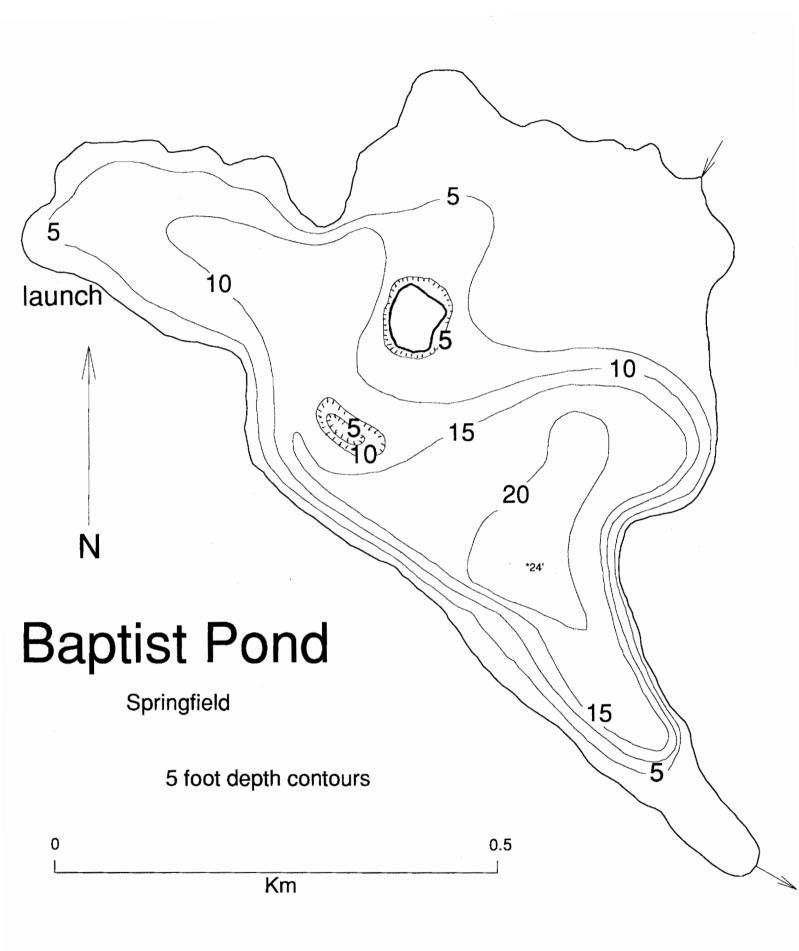
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1996

D.O.	s.D.	PLANT	CHL	TOTAL	CLASS
3	3	2	1	9	Meso.

COMMENTS:

- 1. Baptist Pond was previously surveyed and classified in 1980. There was no change in trophic class and little change in water quality after the 16 year period.
- 2. No public access to the pond.
- 3. The pond is located adjacent to interstate 89 which probably accounts for the slightly elevated sodium, chloride and conductivity values (salted highway).
- 4. Zooplankton were abundant but were dominated by actinopod protozoans, rather than the usual rotifers, or copepods.



FIELD DATA SHEET

LAKE: BAPTIST POND TOWN: SPRINGFIELD DATE: 07/01/96 WEATHER: CLEAR, BREEZY, WARM

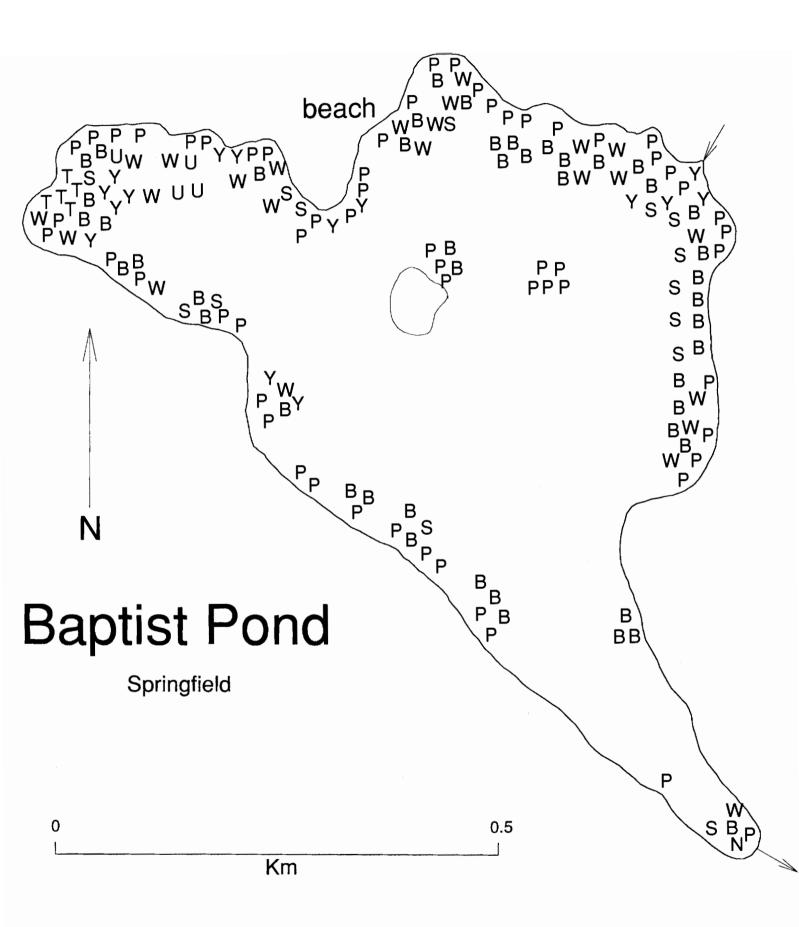
DATE: 07/01/90	WEATI	ER: CLEAR, BREEZY,	WARM
DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	19.5	8.8	93 %
1.0	19.4	8.8	93 %
2.0	18.5	8.8	91 %
3.0	18.2	8.6	90 %
4.0	17.8	8.4	86 %
5.0	14.0	3.5	34 %
6.0	10.8	1.0	9 %
7.0	9.9	0.3	2 %
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SECCHI DISK (m): 2.5 COMMENTS:

BOTTOM DEPTH (m): 7.5

TIME: 1150

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

LAK	E: BAPTIST POND	TOWN: SPRINGFIELD	DATE: 07/01/96	
Кеу	PLANT	NAME	ABUNDANCE	
Key .	GENERIC	COMMON	ABUNDANCE	
Y	Nuphar	Yellow water lily	Sparse	
Т	Typha	Cattail	Sparse	
W	Potamogeton	Pondweed	Scat/Common	
P	Pontederia cordata	Pickerelweed	Scat/Common	
В	Brasenia schreberi	Water shield	Scat/Common	
S	Sparganium	Bur reed	Scattered	
U	Utricularia	Bladderwort	Scattered	
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OVERALL ABUNDANCE: Scat/Common

GENERAL OBSERVATIONS:

1. Plants were common along the northern shore and scattered in the southern (outlet) end, for an overall rating of scattered/common.